Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385

Dominion

JUL 20 2010

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Serial No.	10-426
MPS Lic/LES	R0
Docket No.	50-336
License No.	NPF-65

DOMINION NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 2
LICENSEE EVENT REPORT 2010-002-00
MANUAL REACTOR TRIP ON HIGH STEAM GENERATOR WATER LEVEL

This letter forwards Licensee Event Report (LER) 2010-002-00 documenting an event that occurred at Millstone Power Station Unit 2, on May 22, 2010. This LER provides the follow-up report to an event was reported in accordance with 10 CFR 50.73 (a)(2)(iv) via event notification 45945 pursuant to 10 CFR 50.72 (b)(2)(iv)(B).

If you have any questions or require additional information, please contact Mr. William D. Bartron at (860) 444-4301.

Sincerely,

A. J. Jordan
Site Vice President – Millstone

Attachments: 1

Commitments made in this letter: None

IE22
NRR

cc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406-1415

C. J. Sanders
Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mail Stop 08B3
Rockville, MD 20852-2738

NRC Senior Resident Inspector
Millstone Power Station

ATTACHMENT

LICENSEE EVENT REPORT 2010-002-00

MILLSTONE POWER STATION
DOMINION NUCLEAR CONNECTICUT, INC.

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)	Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Millstone Power Station - Unit 2	05000336	1 OF 3

4. TITLE
Manual Reactor Trip on High Steam Generator Water Level

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER 05000
05	22	2010	2010	002	00	07	20	2010	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*							
1		20.2201(b)		20.2203(a)(3)(i)		50.73(a)(2)(i)(C)		50.73(a)(2)(vii)
		20.2201(d)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(A)
		20.2203(a)(1)		20.2203(a)(4)		50.73(a)(2)(ii)(B)		50.73(a)(2)(viii)(B)
		20.2203(a)(2)(i)		50.36(c)(1)(i)(A)		50.73(a)(2)(iii)		50.73(a)(2)(ix)(A)
10. POWER LEVEL		20.2203(a)(2)(ii)		50.36(c)(1)(ii)(A)	X	50.73(a)(2)(iv)(A)		50.73(a)(2)(x)
100		20.2203(a)(2)(iii)		50.36(c)(2)		50.73(a)(2)(v)(A)		73.71(a)(4)
		20.2203(a)(2)(iv)		50.46(a)(3)(ii)		50.73(a)(2)(v)(B)		73.71(a)(5)
		20.2203(a)(2)(v)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(C)		OTHER
		20.2203(a)(2)(vi)		50.73(a)(2)(i)(B)		50.73(a)(2)(v)(D)		Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
William D. Bartron, Nuclear Station Licensing	860-444-4301

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	SJ	FCV	Moore	N					

14. SUPPLEMENTAL REPORT EXPECTED		15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE)	☒ NO				

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On May 22, 2010 at 1645 with the Millstone Power Station Unit 2 at 100% power in Mode 1, the reactor was manually tripped by operators due to a high water level condition in steam generator (S/G) number 2. Investigation determined that level oscillations occurred because of S/G level control problems associated with number 2 feedwater (FW) regulating valve.

Safety systems functioned as expected based upon the signals received. The operators took actions as trained and in accordance with established procedures. No equipment was damaged as a result of the event. The unit was brought to a stable condition in hot-standby. The cause of the reactor trip was vibration induced wear of the number 2 FW regulating valve positioner beam screw. The degraded valve positioner was replaced and the frequency of on-line preventive maintenance was changed. Design changes are being evaluated to reduce FW regulating valve positioner beam screw wear.

This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10CFR50.73(a)(2)(iv)(B).

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Millstone Power Station - Unit 2	05000336	2010	- 002 -	00	2 OF 3

NARRATIVE

1. Event Description

On May 22, 2010 at 1645 with the Millstone Power Station Unit 2 (MPS2) at 100% power in Mode 1, the reactor [AA] [RCT] was manually tripped by operators due to a high water level condition in the number 2 steam generator (S/G) [SG]. All control rods inserted into the the reactor following the trip. Investigation determined that S/G level oscillations occurred because of feedwater level [SJ] control problems associated with the number 2 feedwater regulating valve [V] (2-FW-51B). When the number 2 S/G water level rose to 84.4% on narrow range instrumentation, the operators manually tripped the reactor in accordance with established operating procedures. In accordance with their training and also established procedures, the operators closed the number 2 steam generator feedwater regulating valve block valve (2-FW-42B) and tripped both main feedwater pumps.

The auxiliary feedwater [BA] system automatically actuated as expected on low level in number 1 steam generator at the setpoint of 18.1% water level. The steam dump valves continued to control main steam [SB] pressure.

Safety systems functioned as expected based upon the signals received. The operators took actions as trained and in accordance with established procedures. No equipment was damaged as a result of the event. The unit was brought to a stable condition in hot-standby (Mode 3) and the degraded valve positioner was replaced. This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of the reactor protection system and the auxiliary feedwater system.

This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of the reactor protection system and the auxiliary feedwater system.

2. Cause

The cause of this event was determined to be vibration induced worn threads on the number 2 feedwater regulating valve (2-FW-51B) positioner beam screw.

3. Assessment of Safety Consequences

The safety consequences associated with this event were very low. The reactor was manually tripped by operators when the number 2 S/G water level rose to 84.4% and the feedwater control system was not responding as expected. All control rods inserted into the reactor following the trip.

There was no safety injection system actuation. There was no significant increase in core power prior to the manual reactor trip. Neither the departure from nucleate boiling or fuel centerline melt fuel design limits were challenged. As such, there were no challenges to the fuel, reactor coolant system or containment fission product barriers.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Millstone Power Station - Unit 2	05000336	2010	- 002 -	00	3 OF 3

NARRATIVE

4. Corrective Action

The following compensatory actions have been completed:

- The degraded feedwater regulating valve (2-FW-51B) positioner was replaced with a new positioner, successfully retested and returned to service on May 23, 2010.
- The on-line preventative maintenance frequency has been increased for installed feedwater regulating valve positioners to improve reliability.
-

Long term corrective actions:

- Design changes are being evaluated to reduce FRV positioner beam screw wear.

Additional corrective actions are being taken in accordance with the station's corrective action program.

5. Previous Occurrences

No previous similar events/conditions were identified.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].